






Work Order ID 61919



September 9, 2010 12:02:44 PM



Page 1


Item ID: D3012-5 Accept  Setup Start 
 Revision ID: Stop 
 Item Name: Decal
 Start Date: 9/09/10 Start Qty: 12.00  Cust Item ID:
 Required Date: 9/13/10 Req'd Qty: 12.00  Customer:

Reference:


Approvals: Process Plan: CZ Date: 10/9/9 Tooling: _____ Date: _____ Run Start 
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------


Draw Nbr	Revision Nbr
D3012	Rev A

100		0.00
	PURCHASING	
Purchasing	Memo	0.00
Purchasing	Issue P/O: <u>12541</u>	
	Make as per Dwg D3012	
	Manufacture from 3M 7mil masking film p/n 8522CP	
	Material release note is required	

CZ 10/9/9 (12)

110		0.00
	Receive & Inspect for Damage & Mat'l Certs	
Packaging	Memo	0.00
Packaging	Ensure Material Release Note is attached	

P 10/9/13 (12)

120		0.00
	QC6- Inspect dimensions to drawing	
QC	Memo	0.00
Quality Control		

8/10/09/13

(12)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 61919

September 9, 2010 12:02:44 PM



Page 2

Item ID: D3012-5

Accept



Setup Start



Revision ID:

Stop



Item Name: Decal

Start Date: 9/09/10

Start Qty: 12.00



Cust Item ID:

Required Date: 9/13/10

Req'd Qty: 12.00



Customer:

Reference:

Run Start



Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

Identify as per dwg & Stock Location: 030

0.00



Packaging

Memo

0.00

Packaging

9/10/10 (72)

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/09/14
MF
10-9-14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

September 9, 2010 12:02:43 PM

Page 1

Work Order ID: 61919



Parent Item: D3012-5



Parent Item Name: Decal


Start Date: 9/09/10

Required Date: 9/13/10

Start Qty: 12.00

Required Qty: 12.00

Comments: Rev A ☐ 01.04.06 ☐ New Issue ☐ EC ☐

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3012-5P  Decal		Purchased	No			110	Each	0.0000	1	12		9/10/13	(12)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN <i>UP</i>	DRAWN BY <i>UP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D3012	REV. A SHEET 1 OF 1
DATE 01.03.30		TITLE DECAL	SCALE 1:1
A	01.03.30	NEW ISSUE	

RELEASED
01.04.06 *#*

- POINT A -
SWL=300lb/136kg
DO NOT USE WITH POINT B
P/N D3012-1

D3012-1

- POINT B -
SWL=500lb/227kg
DO NOT USE WITH POINT A OR C
P/N D3012-3

D3012-3

- POINT C -
SWL=300lb/136kg
DO NOT USE WITH POINT B
P/N D3012-5

D3012-5

CL 10/9/9

W10.6 1919

MATERIAL: WHITE LETTERS ON BLACK ADHESIVE BACK
MANUFACTURED FROM 3M 7 MIL MASKING FILM #8522CP

Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PO REPRINT

Purchase Order ID PO12541

Purchase Order Date 9/09/10

PO Print Date 9/09/10

Page Number 1 of 1

Order From :

VC-STU001

STUDIO DE LETTRAGE 2001
210 MAIN WEST
HAWKESBURY, ON K6A 2H6
CA

Contact Name

Vendor Phone

613 632 5449

Vendor Fax

613 632 9491

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAKED
10/19/10

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req. Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D3083-1P	PLACARD	9/13/10 Yes	20.00 Each	Yours ppd	\$5.0000 \$ 367	\$100.00
		Special Inst:	AS PER DWG D3083 REV. A B61893				
2	D3671-1P	Placard	9/13/10 Yes	✓ 20.00 Each	Yours ppd	\$5.0000 \$ 360	\$100.00
		Special Inst:	AS PER DWG D3671 REV. A B61892				
3	D3012-3P	Decal	9/13/10 Yes	12.00 Each	Yours ppd	\$3.7500 5-384	\$45.00
		Special Inst:	AS PER DWG D3012 REV. A B61918				
4	D3012-5P	Decal	9/13/10 Yes	12.00 Each	Yours ppd	\$3.7500 5-384	\$45.00
		Special Inst:	AS PER DWG D3012 REV. A B61919				
						PO Total:	\$290.00

CERTIFICATE OF CONFORMITY

REQ'D UPON DELIVERY

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

Change Nbr: 2

Change Date: 9/09/10

210 Main Street W
Hawkesbury, Ontario K6A 2H6

Invoice No.:	14504
Date:	09/13/2010
Ship Date:	
Page:	1
Re: Order No.	9509

Dart Aerospace Ltd
1270 Aberdeen
Hawkesbury, Ontario
K6A 1K7

Dart Aerospace Ltd
Hawkesbury, Ontario

Item No.	Unit	Quantity	Description	Tax	Unit Price	Amount
		20	D3083-1p set up	H		50.00
		20	D3671-1P set up	H	2.5000	50.00
		12	D3012-3P set up	H	4.1667	50.00
		12	D3012-5p set up	H	4.1667	50.00
		1	printing	H	75.0000	75.00
						275.00
			H - HST 13%			35.75
			HST			
			PST Exempt: #6122-5207			
Studio de Lettrage HST: #869034678RP001						
Shipped By: Tracking Number:						
Comment: PO 12541						
Sold By:						
					Total Amount	310.75



Scotchcal™

Opaque Imaging Media 8522

Description

This media is specially formulated to dry quickly after printing. Production of outdoor weatherable and long-term indoor durable graphics is now easier than ever. Its changeable adhesive allows easy removal for up to one year.

Advantages

- Optimized for use with selected Epson Stylus Pro printers and Epson Archival inks.
- Optimized for use with selected HP DesignJet Printers and HP DesignJet Ink System UV or HP83UV Color Ink System
- For making opaque, laminated graphics that are outdoor weatherable and long-term indoor durable
- Media:
 - For opaque (reflective) graphics
 - Changeable, easy to remove from warranted substrates up to 1 year later
 - Dries quickly after printing so the overlamine can be applied almost immediately
 - Low slippage paper liner for superior tiling
- Overlaminates:
 - Provide additional UV (ultraviolet) and physical protection for making weatherable finished graphics
 - Available in luster and matte gloss
 - Adhesive allows for heat-assisted or cold-temperature lamination

Applications and Uses

3M™ Scotchcal™ Changeable Opaque Imaging Media 8522 is intended only for ink jet printing and for use with the listed Compatible Products and Equipment and the following applications. Any other application is NOT warranted by 3M or covered by the worldwide 3M™ MCS™ Warranty unless 3M gives its prior written approval for the application.

- First surface images (the image is on top of the film) for opaque posters and signs, including:
 - Graphics for vans, personal vehicles, trucks and buses
 - Novelty posters
 - Retail and point-of-purchase displays
 - Information graphics such as maps and directories
 - Entertainment promotions in museums, zoos, parks, theatres, sports venues
 - Education and presentation graphics

Product Bulletin 8522

Release F, Effective January 2003
Black bar in margin indicates a change

- Legal and courtroom exhibits

- For flat or simple curved surfaces, with or without rivets, used in vertical ($\pm 10^\circ$) applications

Limitations of End Uses

The following uses and applications are specifically NOT warranted.

- Fleet applications in areas that use salt for winter road maintenance
- Application to non-warranted substrates, including wall-board
- Applications subjected to gasoline vapors or spills
- Application to corrugated or highly irregular surfaces or sharply raised areas
- Graphics applied to stainless steel, including stainless steel vehicles
- On flat surfaces with rivets, tenting of 4 to 10 mm around rivets may be expected; rivets may be cut around to eliminate tenting.

Note: Standard ink jet technology is water based. Water-based chemistry is susceptible to the extremes of heat and humidity. This is a factor in most product constructions on the market. Read the Fabrication, Shelf Life and Storage sections in this bulletin. Staying in the middle of these ranges always provides optimum performance.

Compatible Products and Equipment

Thermal Ink Jet Printing Systems

- Epson Stylus Pro 9500, Stylus Pro 10000 printer
 - Epson Archival Inks
- Epson Stylus Pro 10600 printer
 - Epson Archival Inks
- HP DesignJet Printers 2000 and 3000 series
 - HP DesignJet Ink System UV (pigment-based ink)
- HP DesignJet Printers 5000 series
 - HP83UV Color Ink System

Overlaminates (required)

- 3M™ Luster Overlamine 8519 (semi-gloss)
- 3M™ Matte Overlamine 8520

Note: For the full product names of the 3M products listed on this page, please see page 1.

Warranted Substrates

Media 8522 is warranted for use on the following rigid substrates.

Some substrates may "out-gas", resulting in tiny bubbles throughout the surface of the graphic. For maximum performance, be sure the substrate you select is properly cleaned and prepared as recommended by the manufacturer. See Instruction Bulletin 5.1 for additional information.

- Alodine (anodized aluminum)
- Automotive panels (automotive painted steel)
- Fruehauf (painted aluminum)
- FRP (fiberglass reinforced plywood)
- Glass
- Imron® (polyurethane-painted metal panel)
- Acrylic
- Sintra™ board

Test and Approve Non-warranted Substrates Before Use

Media 8522 is not warranted for any substrate other than those listed above. If you want to use it for other substrates, 3M recommends that you test and approve the media for both adhesion and removal characteristics.

Characteristics

Characteristic	Description
Media	7 mil. white, opaque graphic film
Liner	Low-slippage, lay flat paper
Adhesive	Changeable, pressure sensitive
Thickness (media and adhesive)	7.5 to 8 mil (nominal)
Application substrates	See Warranted Substrates, above
Application surfaces	Flat or simple curved surfaces, with or without rivets, used in vertical ($\pm 10^\circ$) applications (no corrugations)
Application temperature range	28° to 110°F (-2° to 43°C) (air and surface)
Roll sizes	36" x 45 feet (914 mm x 13.5 m) 54" x 45 feet (1372 mm x 13.5 m)

How to Become a 3M Ink Jet Registered Fabricator

Only 3M Thermal Ink Jet Registered Fabricators are eligible to offer 3M MCS warranted graphics. In order to become certified, a fabricator must complete the requirements as specified in the 3M Ink Jet Graphics Registered Fabricator Reference Manual located on the 3M website at www.scotchprint.com

Effective Performance Life

To obtain the warranty given below, the graphics must be made according to 3M's recommendations which are detailed in the Warranty and Limited Remedies on page 3. Also see the section, Removability.

Warranted Durability

Media 8522 with Overlaminate 8519 or 8520	Epson Printers		HP Printers	
	Outdoor	Indoor	Outdoor	Indoor
Applied to Warranted Substrates	2 years	5 years	3 years	5 years

Removability

Imaging media 8522 is removable from warranted substrates for 1 year without the aid of chemical strippers or accessories. Refer to Instruction Bulletin 4.23 for additional information.

Fabrication

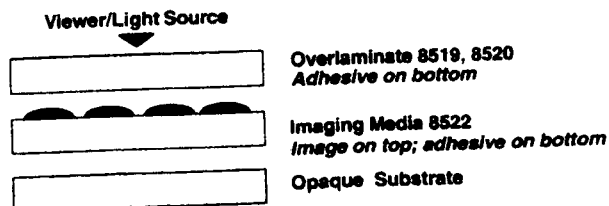
Graphics must be made according to 3M's recommendations which are detailed in the Warranty and Limited Remedies on page 3.

See Instruction Bulletin 4.23 for detailed fabrication, printing and mounting information.

Graphic Construction Options

Opaque (Reflective) Graphics

Opaque graphics made with imaging media 8522 require an overlaminate and an opaque substrate.




Note: For the full product names of the 3M products listed on this page, please see page 1.

Shelf Life and Storage

- 3M™ Scotchcal™ Changeable Opaque Imaging Media 8522 has a shelf life of one year.
- Storage conditions (new and partially used rolls). For optimum performance, use the middle of these ranges:
 - Original packaging, including plastic wrap
 - Relative humidity of 20% to 80%
 - Temperature of 33° to 104°F (0° to 40°C)
 - Away from direct sunlight
- Do not stack unprotected rolls or lay sharp or heavy objects on them.

Health and Safety

 **Caution**

When handling any chemical products, read the manufacturers' container labels and the Material Safety Data Sheets (MSDS) for important health, safety and environmental information.

To obtain MSDS sheets for 3M products:

- By fax, call 1-800-364-0768 in the US and Canada or 1-650-556-8417 for all other locations.
- Electronically, visit us at <http://www.3M.com/msds>.
- By mail, or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturers' instructions for safe operation.

Warranty and Limited Remedies

3M™ MCS™ Warranty for Graphics Produced on HP DesignJet Printers and Epson Stylus Pro Printers

The following is made in lieu of all other express or implied warranties, including any implied warranty of **merchantability** or fitness for a particular purpose: We warrant graphics produced by a 3M Ink Jet Registered Fabricator made with imaging media 8522, printed on an approved HP thermal ink jet printer according to HP's recommendations or Epson Stylus Pro printer according to Epson's recommendations, overlaminated with 8519 or 8520, and applied to a Warranted Substrate according to 3M's recommendations. These



Commercial Graphics Division

3M Center, Building 220-6W-06
PO Box 33220
St. Paul, MN 55133-3220 USA
General Info. 1-800-374-6772
Technical Info. 1-800-328-3908
Fax 1-651-736-4233

Fax-on-Demand 1-800-364-0768 US/Canada or 1-651-732-6506 International
Fax-on-Demand document: 4506
www.scotchprint.com

3M Canada

P.O. Box 5757
London, Ontario
Canada N6A 4T1
1-800-265-1840
Fax 519-452-6245

graphics are covered against failure caused by ultraviolet light, temperature extremes, pollution, and other elements.

If a graphic fails to perform in accordance with 3M product specifications within this time frame, 3M will replace the materials at no charge. **These remedies are exclusive. In no case shall 3M be liable for any direct, indirect, or consequential damages, including any labor charges.**

3M Related Literature

Listed below is related 3M technical literature that may be of interest. You may view and print these Bulletins from our Web site at www.scotchprint.com, or order them via our Fax-on-Demand (FOD) system. Call one of these phone numbers to order the desired bulletins, and specify the FOD document number provided in the chart.

United States or Canada: 1-800-364-0768
International: 1-651-732-6506

Subject	Bulletin No.	FOD No.
Product Bulletins		
3M™ Scotchcal™ Overlamine 8519 and 8520	8519/8520	4524
Instruction Bulletins		
Making thermal ink jet graphics	4.23	6523
Application, substrate selection, preparation and substrate-specific application techniques	5.1	7001
Warranties		
Worldwide 3M™ MCS™ Warranty Packet (includes all Commercial Graphics MCS Warranties)		9503
Worldwide 3M™ MCS™ Warranty Overview-Folder		9504

3M, Scotchcal and MCS are trademarks of 3M.
Epson and Stylus Pro are trademarks of Epson.
HP and DesignJet are tradenames of Hewlett Packard.
Sintra is a trademark of Swiss Aluminum Ltd.
Imron is a registered trademark of DuPont in the United States

Bulletin Change Summary

The Epson Stylus Pro Printers 9500, 10000 10600, and Epson Archival Inks have been added to this bulletin. Additional changes resulting from this addition are marked with black bars in the margin.

3M México, S.A. de C.V.

Av. Santa Fe No. 55
Col. Santa Fe, Del. Alvaro Obregón
México, D.F. 01210
52-55-52-70-04-00
Fax 52-55-52-70-22-77

3M Puerto Rico, Inc.

Puerto Rico Industrial Park
P.O. Box 100
Carolina, PR 00986-0100
787-620-3000
Fax 787-750-3035

©3M 2003. All rights reserved.

Product Bulletin 8522 - 3